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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/892,882	06/28/2001	Ji Chul Lim	8733.449.00	3035

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1900 K STREET, NW
WASHINGTON, DC 20006

EXAMINER

LANEAU, RONALD

ART UNIT	PAPER NUMBER
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2674

DATE MAILED: 01/26/2004

7

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Application No.

09/892,882

Applicant(s)

LIM ET AL.

Examiner

Ronald Laneau

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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).
- Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 13 May 2003.
- 2a) ☒ This action is **FINAL**. 2b) ☐ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-25 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1,9,17 and 19 is/are rejected.
- 7) ☒ Claim(s) 2-8,10-16,18 and 20-25 is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. §§ 119 and 120

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. _____.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
* See the attached detailed Office action for a list of the certified copies not received.
- 13) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. § 119(e) (to a provisional application) since a specific reference was included in the first sentence of the specification or in an Application Data Sheet. 37 CFR 1.78.
a) ☐ The translation of the foreign language provisional application has been received.
- 14) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. §§ 120 and/or 121 since a specific reference was included in the first sentence of the specification or in an Application Data Sheet. 37 CFR 1.78.

Attachment(s)

- 1) ☐ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☐ Information Disclosure Statement(s) (PTO-1449) Paper No(s) _____
- 4) ☐ Interview Summary (PTO-413) Paper No(s) _____
- 5) ☐ Notice of Informal Patent Application (PTO-152)
- 6) ☐ Other: _____

Request for Reconsideration

1. The request for reconsideration filed on 5/13/03 has been entered. Claims 1-25 are still pending.

Claim Rejections - 35 USC § 103

2. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

3. This application currently names joint inventors. In considering patentability of the claims under 35 U.S.C. 103(a), the examiner presumes that the subject matter of the various claims was commonly owned at the time any inventions covered therein were made absent any evidence to the contrary. Applicant is advised of the obligation under 37 CFR 1.56 to point out the inventor and invention dates of each claim that was not commonly owned at the time a later invention was made in order for the examiner to consider the applicability of 35 U.S.C. 103(c) and potential 35 U.S.C. 102(e), (f) or (g) prior art under 35 U.S.C. 103(a).

4. Claims 1, 9, 17, and 19 are rejected under 35 U.S.C. 103(a) as being unpatentable over the Applicant's Admitted Prior Art (AAPA) in view of Shirahashi et al (US 5,285,301).

As per claims 1 and 19, the AAPA discloses a liquid crystal display (LCD) panel, comprising: a plurality of data lines included in a display area of the LCD panel, a plurality of gate lines crossing the data lines, a plurality of switching devices positioned at intersections

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between the data lines and the gate lines, a plurality of pixel electrodes each driven by one of the switching devices (see bgrd. of the invention, figs. 4 and 5). Basically the AAPA discloses every element of the claimed invention except a dummy data line included in a non-display area outside the display area and formed in parallel to the data lines. Shirahashi et al is cited to teach a liquid crystal display device having peripheral dummy lines i.e. the dummy data lines are in a non-display area outside the display area and formed in parallel to the data lines as claimed (see figs. 1 and 15, DDL).

It would have been obvious to one of ordinary skill in the art to utilize the peripheral dummy data line taught by Shirahashi et al into the AAPA because it would provide a liquid crystal display device wherein the likelihood of breakage of the outermost signal line is greatly reduced (col. 1, lines 61-65).

As per claim 9, the AAPA discloses a liquid crystal display (LCD) panel, comprising: a plurality of data lines included in a display area of the LCD panel, a plurality of gate lines crossing the data lines, a plurality of switching devices positioned at intersections between the data lines and the gate lines, a plurality of pixel electrodes each driven by one of the switching devices (see bgrd. of the invention, figs. 4 and 5). Basically the AAPA discloses every element of the claimed invention except a dummy data line for compensating a capacitor value difference of an adjacent pixel electrode thereto. Shirahashi et al is cited to teach a liquid crystal display device having peripheral dummy lines which can compensate a capacitor value difference of an adjacent pixel electrode since each pixel includes a capacitor C_{add} as claimed (see fig. 15, C_{add}).

It would have been obvious to one of ordinary skill in the art to utilize the dummy data line taught by Shirahashi et al into the AAPA for the same reasons given in claims 1 and 19.

As per claim 17, this is a method claim corresponding to the apparatus claim 9 and is therefore rejected on the same basis set forth in claim 9.

Allowable Subject Matter

5. Claims 2-8, 10-16, 18, and 20-25 are objected to as being dependent upon a rejected base claim, but would be allowable if rewritten in independent form including all of the limitations of the base claim and any intervening claims.

Shirahashi et al teach a peripheral (outside or non-display area) dummy data line but do not teach:

As per claims 2, 10, and 18, a liquid crystal display panel wherein the dummy data line is supplied with a signal having an inverted phase with respect to data on a one of the data lines adjacent to the dummy data line.

As per claims 3-8 and 11-16, a liquid crystal display panel further comprising a plurality of dummy switching devices positioned intersections between the dummy data line and the gate lines; and a plurality of dummy pixels electrodes each connected to one of the dummy switching devices.

As per claims 20-25, an LCD device further comprising: dummy voltage supply means for supplying a signal such that a first voltage charged into a first one of the pixel electrodes which is adjacent to the dummy voltage line becomes approximately the same as a second

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voltage charged into a second one of the pixel electrodes disposed adjacent to the first one of the pixel electrodes.

Response to Arguments

5. Applicant's arguments filed on 5/13/03 have been fully considered but they are not persuasive.

Applicant's arguments about Shirahashi teaching the use of dummy gate lines and dummy data lines outside the gate line and data lines are correct. Applicant has claimed a dummy data line that is in a non-display area outside the display area so Shirahashi has met this limitations from the applicant's claims. Furthermore, applicant argues that there is the expectation that the dummy data and gate lines of Shirahashi will be broken during the manufacturing process. Applicant is therefore requested to point out the column and lines where Shirahashi has mentioned about such expectations. Applicant also mentions that there is no teaching in Shirahashi of a dummy data line receiving a signal in order to affect the operation of an adjacent liquid crystal display pixel. Contrary to applicant's arguments, the dummy lines taught by Sarahashi actually receive a voltage which is fixed and somehow that will effect the operation of the adjacent pixel. Therefore, the rejection finally stands.

6. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Ronald Laneau whose telephone number is 703-305-3973. The examiner can normally be reached on Monday-Thursday from 8:00 AM to 6:00 PM or via email: ronald.laneau@uspto.gov.

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If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Richard Hjerpe can be reached at 703-305-4709.

7. **THIS ACTION IS MADE FINAL.** Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire THREE MONTHS from the mailing date of this action. In the event a first reply is filed within TWO MONTHS of the mailing date of this final action and the advisory action is not mailed until after the end of the THREE-MONTH shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the mailing date of this final action.

8. **Any response to this final action should be mailed to:**

BOX AF

Commissioner of Patents and Trademarks

Washington, D.C. 20231

or faxed to:

(703) 872-9314 (for Technology Center 2600 only)

Hand-delivered responses should be brought to Crystal Park II, 2121 Crystal Drive, Arlington, VA, Sixth Floor (Receptionist).

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Any inquiry of a general nature or relating to the status of this application or proceeding should be directed to the Technology Center 2600 Customer Service Office whose telephone number is (703) 306-0377.

Ronald Laneau
Examiner
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A handwritten signature in black ink, appearing to read 'R. Hjerpe', with a stylized, cursive script.

RICHARD HJERPE
SUPERVISORY PATENT EXAMINER
TECHNOLOGY CENTER 2600

rl
January 22, 2004